

SIMPLE CHEMICAL VAPOR DEPOSITION SYSTEM AND METHODS FOR DEPOSITING MULTIPLE-METAL ALUMINIDE COATINGS

Abstract of the Disclosure

A chemical vapor deposition (CVD) system and method for applying an aluminide coating constituted by two or more extrinsic metal components on a jet engine component. The aluminide coating is capable of forming a protective complex oxide upon subsequent heating in an oxidizing environment. At least one of the extrinsic metals in the aluminide coating is provided as a first vapor phase reactant from a receptacle coupled by a closed communication path with the reaction chamber of the CVD system and free of a carrier gas. The aluminide coating is formed by the chemical combination of the first vapor phase reactant with a second vapor phase reactant either created in situ in the reaction chamber or supplied by a carrier gas to the reaction chamber from a precursor source.